REMARKS

At the outset, the Examiner is thanked for the thorough review and consideration of the pending application. The Final Office Action dated August 19, 2009 has been received and its contents carefully reviewed.

Claims 28-31, 34-36, 38, 40-43, 46-48, 50-52, 54 and 56-58 are rejected. By this amendment, claims 28, 40, and 50 have been amended. Accordingly, claims 28-31, 34-36, 38, 40-43, 46-48, 50-52, 54 and 56-58 are currently pending. This amendment is based on the original specification and drawings. No new matter is added. Reexamination and reconsideration of the pending claims is respectfully requested.

Claims 28, 40, and 50 are amended to correct grammatical errors and to spell out an acronym.

Claims 28-30, 34-36, 40-42, 46-48, 50-51, 54 and 56-58 are rejected under 35 USC 103(a) as being unpatentable over US patent No. 5,847, 690 to Boie et al (hereinafter "Boie") in view of US patent No. 6,762,752 to Perski et al. (hereinafter "Perski") and further in view of US patent No. 5,657,011 to Komatsu et al. (hereinafter "Komatsu"), and US Patent No. 7,463,246 to Mackey, (hereafter "Mackey").

Claims 31, 38, 43 and 52 are rejected under 35 USC 103(a) as being unpatentable over Boie in view of Perski in view of Komatsu and Mackey, as applied in claim 28 and further in view of US Patent No. 6,630,274 to Kiguchi et al, (hereinafter "Kiguchi"). These rejections are respectfully traversed and reconsideration is requested.

Applicants respectfully traverse the rejection of claims 28, 40, and 50 and submit the Office has failed to present a *prima facie* case of obviousness as required to support the 35 U.S.C. 103(a) rejections. Applicants assert the record fails to disclose or render obvious a motivation or suggestion to combine the cited references at the time the invention was made. The Federal Circuit has stated that "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). MPEP 2142.

Applicants respectfully assert that the references do not include any teaching or suggestion that would lead one of skill in the art at the time of the invention to modify *Boie* with *Perski* and *Komatsu* and further modify that combination with *Mackey* as the Office has asserted. In fact, the only way one of skill in the art would have been able to arrive at the Office's addition of "a light-shielding layer and a color filter layer corresponding to the pixel electrodes are disposed on the EM sensor, wherein the light-shielding layer and the color filter layer are not coplanar with the EM sensor," for example, as recited in claim 28 (and similarly recited in claims 40 and 50) would have been to use the Applicants' own specification as a roadmap. Thus, Applicants assert that the Office has used impermissible hindsight reasoning to arrive at the Applicants' invention as-claimed.

As evidence, the Office states "the production process[es] of *Mackey* clearly show a separate layer deposition technique in which each layer of the material of the capacitor sensing material and the light shielding material, also the processes show[ ] that the color filter is not coplanar in the design" (OA p. 5 last paragraph). However, *Mackey* discloses a stand-alone capacitive sensor device. This is not integrated with a display at all. In fact, there simply is no 'color filter' element disclosed, and therefore, obviously, could not be coplanar in the design. Moreover, *Mackey* teaches away from integrating the sensor directly with a LCD device. For example, *Mackey* claim 1 discloses "said underlying image is separate from said capacitive sensing device, wherein said capacitive sensing device is separate from active components used to comprise an information display device." (See also *Mackey* abstract). Consequently, *Mackey* cannot be used as a combined reference to teach "an electromagnetic EM sensor inside an LCD panel," a stated object of the present invention (para. 0025). Accordingly, claims 28, 40, and 50 are not obvious and unpatentable.

Additionally, Applicants respectfully submit that the cited references fail to disclose all the included elements in independent claim 40. Specifically, the references fail to disclose "a plurality of pixel regions on the first substrate, each pixel region including a thin film transistor, pixel electrode, and a common electrode," as recited in claim 40. Figure 2 of *Boie* discloses a transparent conductor 14 on the second substrate which is described as "the common voltage element of the liquid crystal display" (col. 3, lines 37-38). *Boie* requires the transparent conductor on the second substrate as shared with the LCD common conductor to form the sensor

circuitry (*Boie* col. 3, lines 33-40). However, claim 40 recites the liquid crystal device common element on the first substrate. This defect is not cured by the remaining references. Accordingly, claim 40 recites allowable subject matter.

Similarly, the Applicants respectfully submit that the references fail to disclose "a thin film transistor array on the first substrate; . . . an insulating layer over the thin film transistor array and the pixel electrodes; an EM sensor including first and second coil arrays formed of a transparent electrode is directly on the insulating layer, wherein each of the first and second coil arrays include a plurality of coils, and each of the plurality of coils has first and second open ends and wherein the first coil array is perpendicular to the second coil array," as recited in claim 50. As discussed above in regard to claim 40, *Boie* discloses that the black matrix material and transparent conductors form the sensor pattern on the second substrate. Claim 50 recites the sensor formed on the first substrate. Again, this defect is not cured by the remaining references. Accordingly, claim 50 recites allowable subject matter.

In sum, the Office, at least, has not presented a *prima facie* case of obviousness and has not disclosed all the elements in the independent claims. Accordingly, Applicant respectfully submits that claims 28, 40 and 50 are allowable over *Boie* in view of *Perski* in view of *Komatsu* and *Mackey*. Claims 29-30, 34-36, 41-42, 46-48, 51, 54 and 56-58, which depend either directly or indirectly from independent claims 28, 40, and 50, are also allowable for at least the same reasons as discussed above. Therefore, Applicant respectfully requests reconsideration and withdrawal of the 35 U.S.C. § 103(a) rejection of claims 28-30, 34-36, 40-42, 46-48, 50-51, 54 and 56-58.

Applicants believe the application is in condition for allowance and early, favorable action is respectfully solicited.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at (202) 496-7500 to discuss the steps necessary for placing the application in condition for allowance. All correspondence should continue to be sent to the below-listed address.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911.

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Respectfully submitted,

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